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Monday, October 31, 2005

Supreme Court takes patentable subject matter case

The patent world was surprised today by the news that the Supreme Court will hear the case *Laboratory Corp. of America v. Metabolite Laboratories*. The case involves the scientific discovery that levels of homocysteine in the blood can indicate a deficiency in two B vitamins. But how the Supreme Court resolves the case may also have substantial implications for the patentability of business methods and even of software. We could get at least one strong opinion from at least one justice (John Paul Stevens) that from the point of view of today's patent practice would be very radical. Such an opinion, described below, would imply the invalidation not only of the kind of scientific discovery claim in *Metabolite*, but also business method patents and almost all software patents. It is unknown whether there are enough justices to make this a majority opinion. The profound implications of such an opinion suggest that the Court may punt and decide the issue on other grounds.

Section 101 of the U.S. patent statute (Title 35) states that patentable subject matter is limited to four broad categories: "process, machine, manufacture, or composition of matter..." This implies, presumably, that there other categories that cannot be patented. For example, "algorithms" and "laws of nature" are two areas the Supreme Court has previously stated could not be patented. (Why algorithms are nevertheless now routinely patented is the subject of a paper I wrote last year -- I will attempt to summarize below). The definition of what can and cannot be patented has changed over time. The Supreme Court typically took a narrow view, for example in the *Funk Brothers* and *Flook* cases. However, the most recent Supreme Court 101 subject matter cases, *Chakrabarty* and *Diehr*, took a broader view. *Diehr* led to the modern view that software can be patented. The Federal Circuit has tended to ignore the restrictive cases, allowing software to be patented and, in the 1998 *State Street* case, allowing business methods to be patented.

Recently the United States Patent Office decided to align itself more closely with the Federal Circuit and loosen up its restrictions on patenting business methods. But today, the United States Supreme Court surprised the patent world by saying that it will hear the appeal in Metabolite. In this case, the "inventor" discovered a law of nature, namely that elevated levels of homocysteine in the blood tend to indicate a deficiency in the B vitamins cobalamine or folate. To take advantage of this discovery, the "inventor" claimed (in claim #13):

> 13. A method for detecting a deficiency of cobalamin or folate in warm-blooded animals comprising the steps of:
>
> assaying a body fluid for an elevated level of total homocysteine; and
>
> correlating an elevated level of total homocysteine in said body fluid with a deficiency of cobalamin or folate.

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There is nothing novel about testing the blood for levels of homocysteine. The only novel and non-obvious part of the claim is the scientific discovery, the "correlating" step. If the claim is taken "as a whole," it (and any properly written claim covering any subject matter) passes muster under Section 101. If, however, focus is put on the subset of the claim that contributes to its novelty and non-obviousness, that portion of the claim will fail as a forbideen "law of nature."

Here is how the Supreme Court in its opinion granting the appeal expressed the issue:

> Whether a method patent setting forth an indefinite, undescribed, and non-enabling step directing a party simply to "correlat[e]" test results can validly claim a monopoly over a basic scientific relationship used in medical treatment such that any doctor necessarily infringes the patent merely by thinking about the relationship after looking at a test result.

This will be the first time in over a decade that the Supreme Court has heard a case on this subject -- a decade that saw the end of restrictions on software patents (despite "algorithms" being unpatentable) and the rise of business method patents.

So why can software be patented despite "algorithms" being a forbidden subject matter under *Flook* and *Diehr*? Because clever drafters have added gratuitous steps or elements so that a patent claim, interpreted "as a whole," involves more than just an algorithm. For example, if you discover a new algorithm, you can patent that algorithm running as a computer program on a "device with memory." The "device with memory" is a gratuitous element, in that it does nothing to add to the novelty or the non-obviousness of the claim. It is only there to turn unpatentable subject matter into patentable subject matter.

There is an old methodology that would have prevented such clever drafting to get around the 101 subject matter restrictions. It comes from the old British *Nielson* case. This methodology essentially says that, for purposes of determining whether a claim covers patentable subject matter, you don't look at the "claim as a whole," (the *Diehr* test), but instead just look at that subset of the claim that is the inventive contribution. In other words, look at only those elements or steps that contribute to the novelty or non-obviousness of a claim.

The *Nielson* test was followed by the Supreme Court in expressly in cases from *O'Reilly v. Morse* (yes, that Morse, the telegraph case) in the 19th century to *Flook* in 1978. Had *Flook* been followed, most software and business methods would be unpatentable in the U.S. today.

The most rational, but also most radical, way for the Court to resolve *Metabolite* would be a return to the *Neilson/Flook* test. Rational, because it's the only proven test we have for enforcing forbidden categories of patentable subject matter, whether they be "laws of nature," "algorithms," or business methods. Radical, because it would invalidate at a stroke not only the *Metabolite*-style discovery-based claims and business method patents, but almost all U.S. software patents as well. Justice John Paul Stevens wrote the *Flook* opinion in 1978 and is the only justice from that era still on the Court. So there is a good chance that we will at least get a strong dissent along these lines. However, the more likely majority outcome will, if it overturns the patent, do so on the more narrow grounds that it involves a mental step ("any doctor necessarily infringes the patent merely by thinking about the relationship after looking at a test result") or that it fails the 112 written description standard.

Posted by Nick Szabo at 10:44 AM

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